



Australian Bureau of Statistics

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ANNUAL SEASONAL REANALYSIS

INTRODUCTION

The annual seasonal reanalysis of the Labour Force series was conducted on estimates up to January 2014. The seasonally adjusted and trend estimates in this issue reflect adjustments made to the data as a result of this reanalysis. An exception is the aggregate hours worked series on which the annual reanalysis was conducted on estimates up to December 2013 and applied from January 2014, as noted in last month's issue.

While seasonal factors for the complete time series are estimated each month, they are reviewed annually at a more detailed level than is possible in the monthly processing cycle. The annual seasonal reanalysis takes into account each additional year's original data and assesses the appropriateness of seasonal adjustment parameters. An annual seasonal reanalysis does not normally result in significant changes to published estimates.

WHAT IS SEASONAL ADJUSTMENT?

The Labour Force data are collected monthly or quarterly using the same methods and definitions resulting in an original monthly or quarterly time series.

Seasonal adjustment is applied to some of the original series to remove influences that are:

- systematic and calendar related, for example school leavers joining the labour force every February; or
- systematic and related to holidays which move around between months but which still occur every year, for example Easter.

Systematic and calendar related influences which have the same timing, same direction and similar magnitude every year, are removed to create the seasonally adjusted series. The presence and size of influences due to moving holidays and variable timing of the commencement of interviews in January are estimated using a regression-ARIMA framework and also removed. The regression-ARIMA framework enables these influences to be accurately estimated. Without accurate estimation of these effects, the seasonal pattern may be obscured, and the seasonal factor estimates may be less accurate.

The seasonally adjusted series are then smoothed to create the trend series. Seasonally adjusted and trend series are revised each month to take account of the latest original estimates.

The ABS aims to produce high quality seasonally adjusted estimates that are without systematic related variation. These series can be used to better inform month-to-month comparisons.

Seasonally adjusted employment estimates include a correction for the influences of Easter and

variable timing of the commencement of interviews in January.

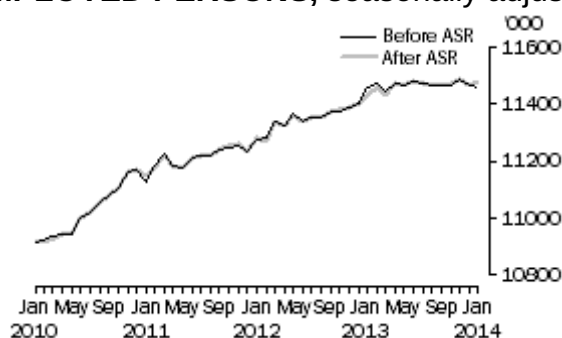
Seasonally adjusted aggregate hours worked estimates include more extensive corrections for the influence of public holiday and school holiday effects. Each moving holiday is estimated and removed in the aggregate state/territory estimates. State level influences are used to estimate the school and public holiday effects in the Australia and full-time/part-time by sex estimates.

During each annual seasonal reanalysis, the framework for estimating moving holidays and variable timing of the commencement of interviews in January is assessed for appropriateness. This is to ensure that the impact of these influences are being appropriately estimated from year to year, that assumptions used in the regression framework continue to be valid, and to implement improvements in estimation methodology.

IMPACT ON THE LABOUR FORCE DATA

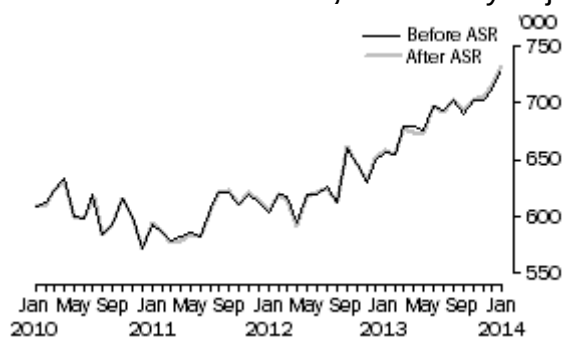
The impact of the annual seasonal reanalysis on the Labour Force data for the period February 1978 to February 2014 was minimal. The seasonally adjusted employed persons level series changed by an average absolute monthly value of 1,100 persons. This includes the impact of both the normal seasonal adjustment process and the results of the annual seasonal reanalysis (ASR). The impact on the employed persons trend series was a change in the average absolute monthly value of 800 persons.

EMPLOYED PERSONS, seasonally adjusted



The unemployed persons seasonally adjusted level series for the period February 1978 to February 2014 changed by an average absolute monthly value of 200 persons. The unemployed persons trend series changed by an average absolute monthly value of 100 persons.

UNEMPLOYED PERSONS, seasonally adjusted



FURTHER INFORMATION

For any queries regarding the implementation of these changes contact Labour Force Estimates

on Canberra 02 6252 6525, or via email at labourforce@abs.gov.au or Time Series Analysis Section on Canberra 02 6252 6345 or via email at time.series.analysis@abs.gov.au.

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